Jeopardy Assessment

for the Proposed Incidental Taking Authorization
of the Bluestem Goldenrod (*Solidago caesia*)

South Milwaukee School District
Milwaukee County, Wisconsin

Background

The state-endangered bluestem goldenrod is a member of the large genus *Solidago*. The common name of the species comes from the glaucous stem that has a blue appearance. *Solidago caesia* grows to a height of 3 to 10 dm tall from a short, stout caudex-like rhizome, although they sometimes have long, creeping rhizomes as well. In Wisconsin, bluestem goldenrods typically flower from mid-August through late September, and the yellow flowers are in the leaf axils. Leaves are mostly arrayed along the stem. In Wisconsin, bluestem goldenrods occur in southern mesic and dry-mesic forests, sometimes along paths and small openings. Many of the sites are on level ground, but several are on slopes.

Bluestem goldenrod is confined to only Milwaukee and Racine counties in Wisconsin. Many populations are close to Lake Michigan. There are currently 32 sites where bluestem goldenrod has been documented since 1989. Of these sites, only 7 populations are of good to excellent estimated viability, with an additional 3 populations ranked at fair to good. The remainder of the populations have either fair or poor estimated viability. The 3 best populations, including Milwaukee County's Rawson Park site, have stem numbers estimated to be in the thousands.

In summary, bluestem goldenrod occurs mostly in higher quality southern dry-mesic or mesic forests. It only occurs in Racine and Milwaukee counties, with many of the sites close to Lake Michigan. Many of the documented populations have fair to poor estimated viability. The Rawson Park site, included within and directly south of the proposed South Milwaukee School District (SMSD) project site, is one of the top 3 sites in Wisconsin.

Jeopardy Assessment

The proposed SMSD project will result in the permanent loss of 3 individual plants out of a total of over 250 plants surveyed in potential impact zones. Many additional plants exist south of the project area in Rawson Woods proper. The proposed project has been reconfigured to avoid additional incidental take. While the Rawson Woods site is one of the largest populations in the state, the loss of 3 plants is unlikely to jeopardize the population at this site. The department has determined that the proposed project is not likely to jeopardize the continued existence or recovery of the state population of these plants or the whole plant-animal community of which they are a part because the 3 plants consists of a very small proportion of the total population at this site. Additionally, the ecological management implemented by SMSD and their environmental consultant should benefit the population of bluestem goldenrod in the long term.

Conservation Measures

SMSD completed, and the DNR approved, a Conservation Plan for bluestem goldenrod that outlines SMSD's commitments to implement conservation measures that will minimize any adverse effects on the state endangered bluestem goldenrod. They are summarized below:

1. Surround core and non-impact habitat areas with orange safety fencing prior to commencement of earth moving. The general contractor will inspect the fencing regularly. These areas will not be impacted by any phase of the proposed construction.

2. Use education and monitoring to ensure compliance with restricted access to the core and non-impact areas.
3. Conduct habitat enhancement, restoration, and management in the core and non-impacted secondary habitat. Develop restoration and management plan for the entire site.
4. Develop an educational program and involve students and staff in stewardship.
5. Monitor bluestem goldenrod annually for 10 years, with greater intensity during construction and in post-development years 1, 3, 5, and 10. Reconnaissance surveys will be conducted in years 2, 4, and 6-9. After year 10, there will be annual reconnaissance surveys.
6. The South Milwaukee School District has committed up to $50,000 for the protection and restoration of bluestem goldenrod for the first five years of the project and approximately $5,000 annually for years 5 through 10. In addition, SMSD has committed to the use of professional bluestem goldenrod expertise throughout the construction period and restoration/management phases of the project.